PLACED SEARCHED

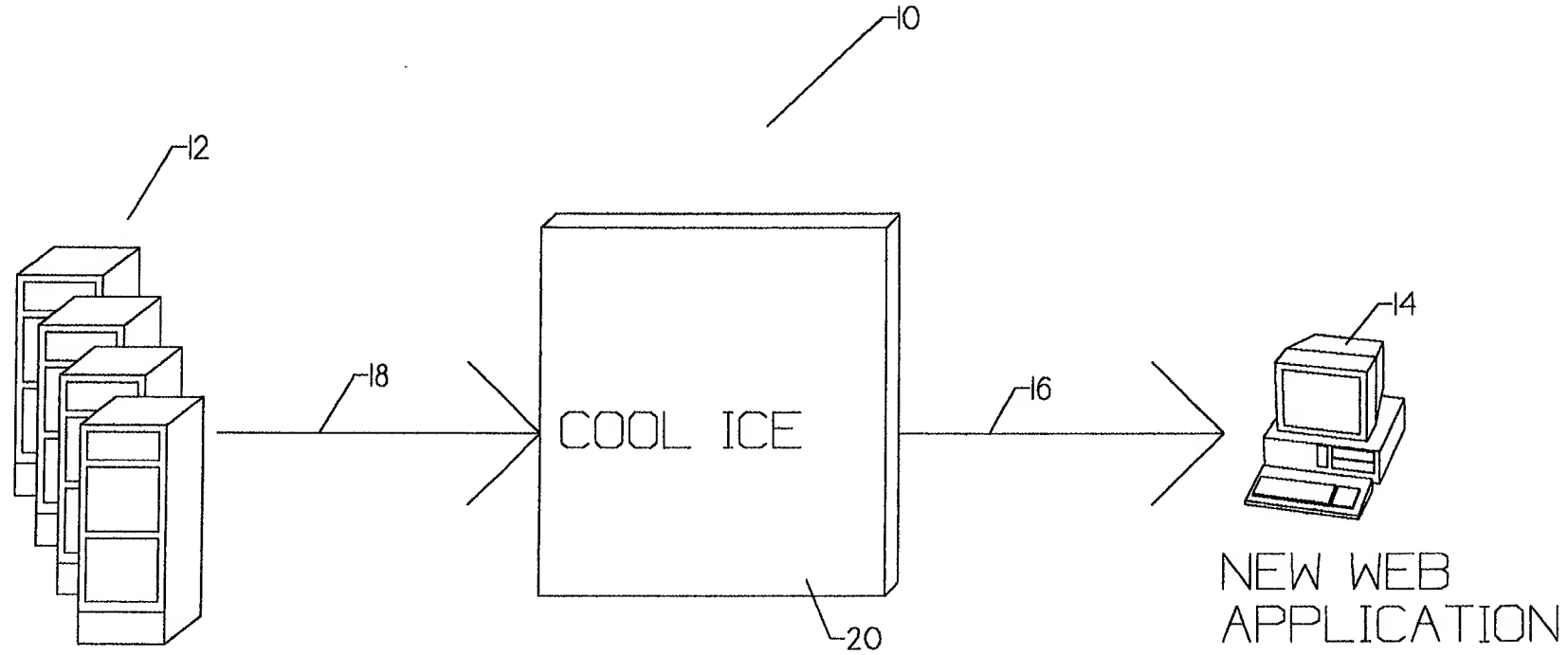

FIG. 1

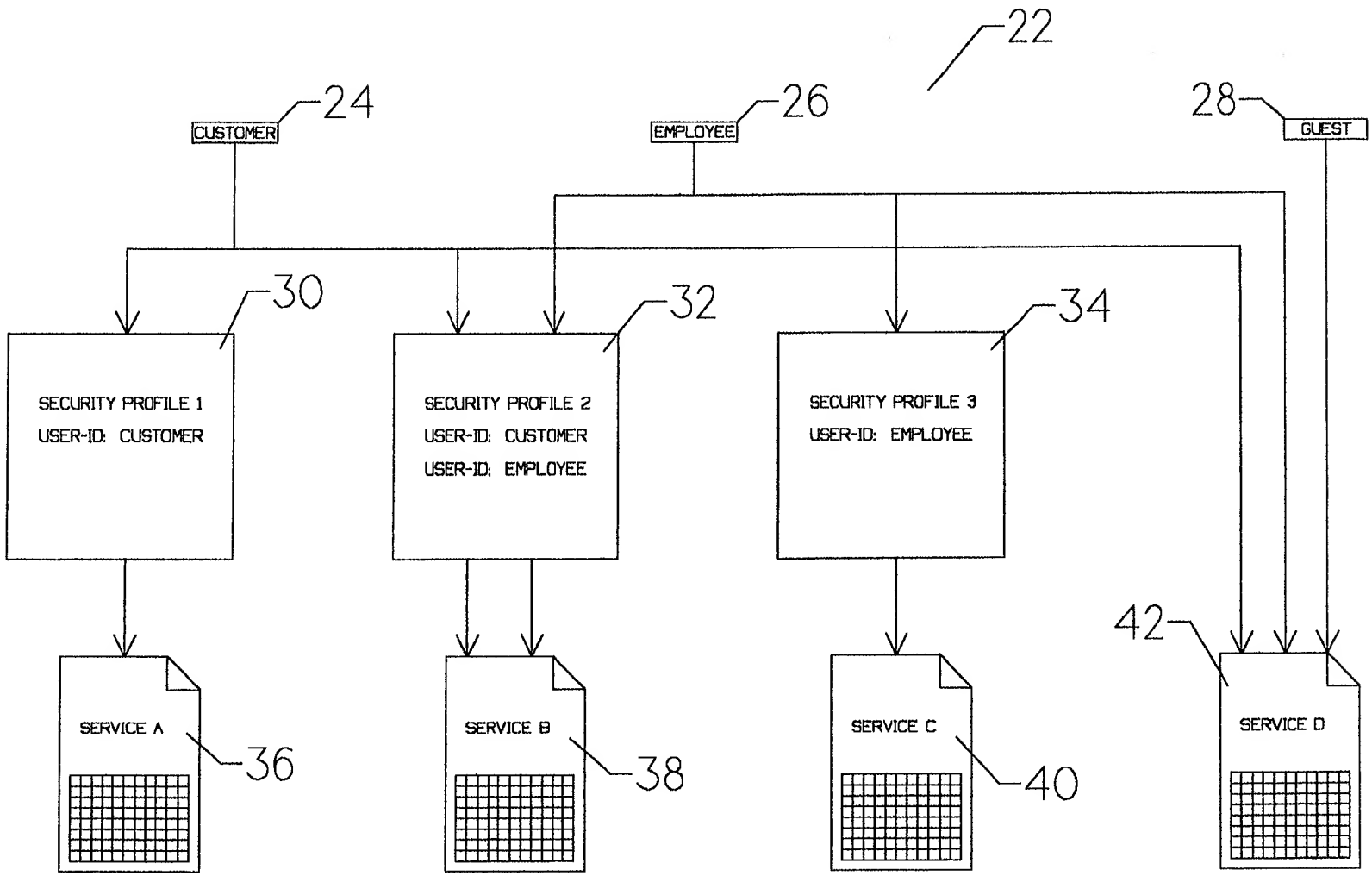
22
CUSTOMER
24
EMPLOYEE
26
28
GUEST
30
32
34
SECURITY PROFILE 1
USER-ID: CUSTOMER
SECURITY PROFILE 2
USER-ID: CUSTOMER
USER-ID: EMPLOYEE
SECURITY PROFILE 3
USER-ID: EMPLOYEE
42
SERVICE A
36
SERVICE B
38
SERVICE C
40
SERVICE D

FIG. 2

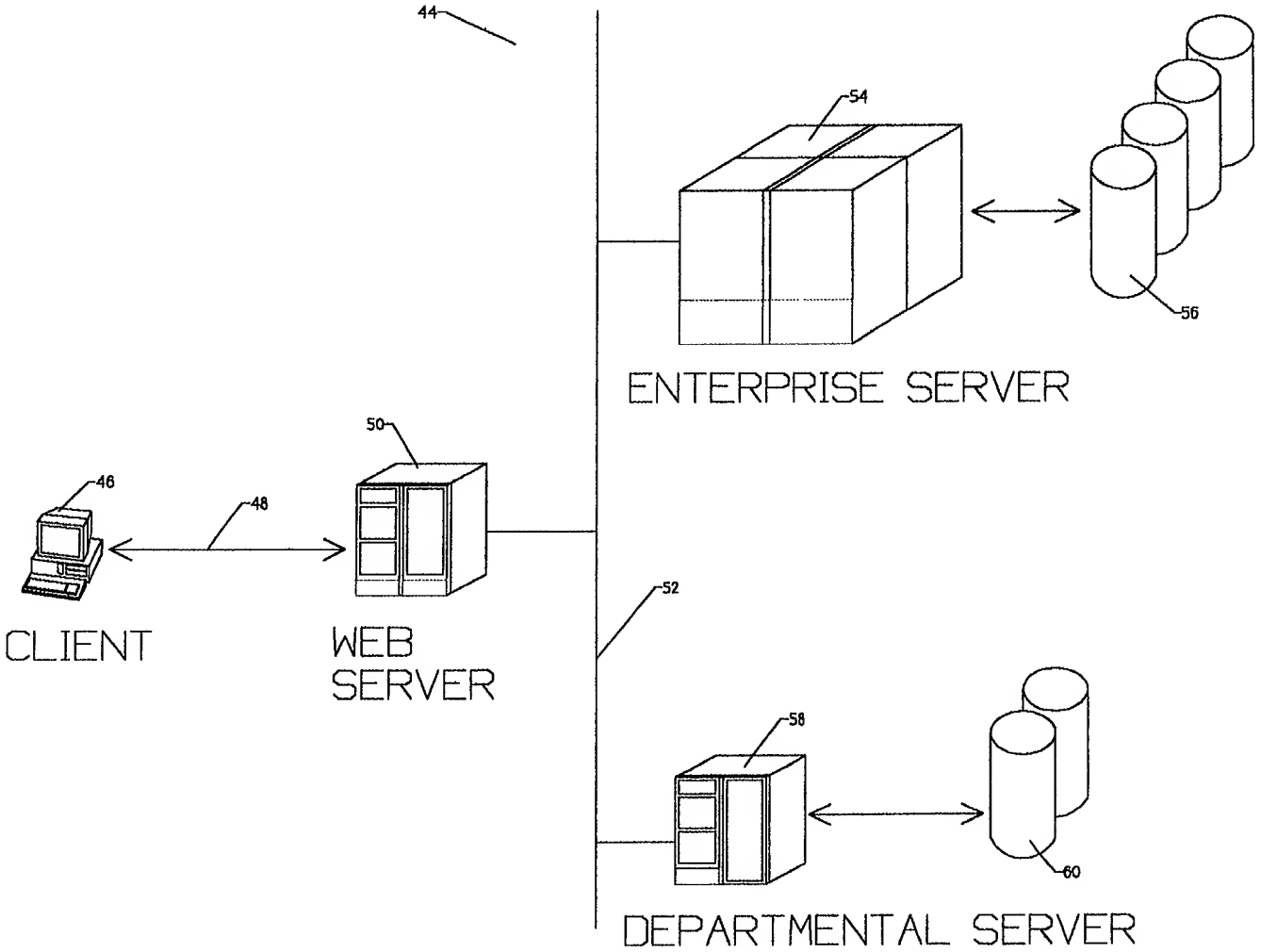
44
54
56
ENTERPRISE SERVER
50
46
48
52
CLIENT
WEB
SERVER
58
60
DEPARTMENTAL SERVER

FIG. 3

PROCESS SPECIFICS

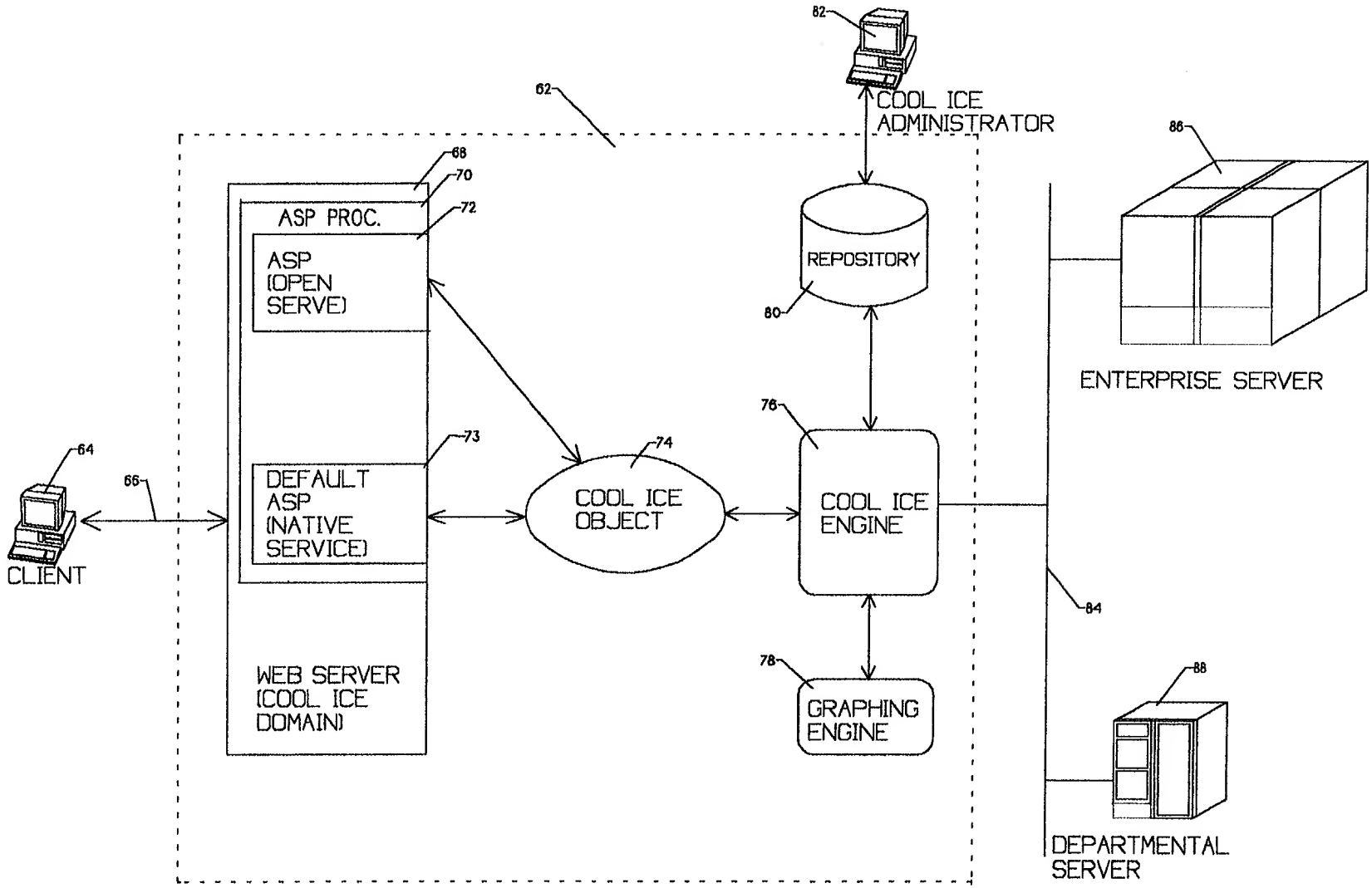

FIG. 4

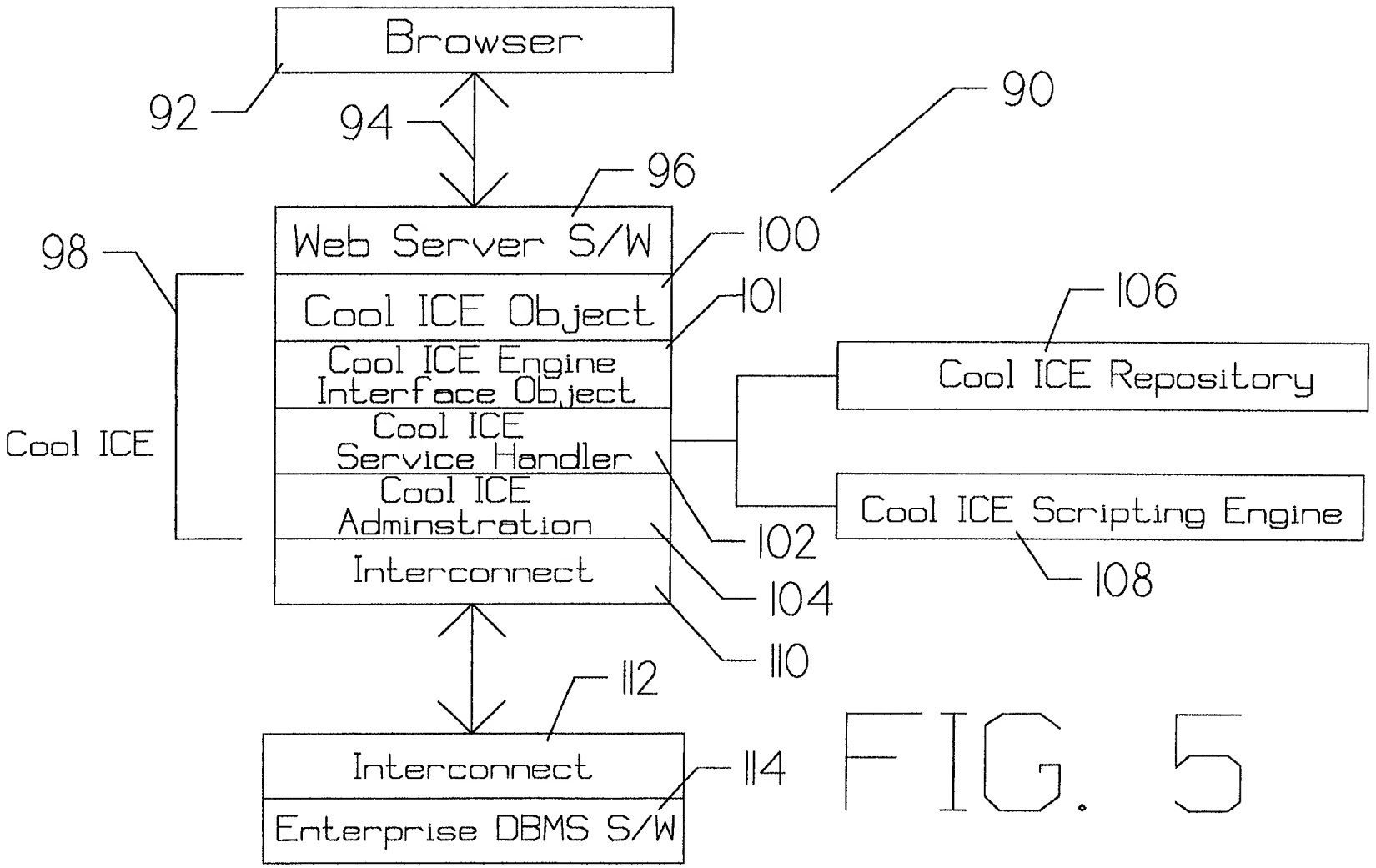
Browser
92
94
90
96
Web Server S/W
100
98
Cool ICE Object
101
106
Cool ICE Engine Interface Object
Cool ICE Repository
Cool ICE
Cool ICE Service Handler
Cool ICE Scripting Engine
Cool ICE Adminstration
102
108
Interconnect
104
110
112
Interconnect
114
Enterprise DBMS S/W

FIG. 5

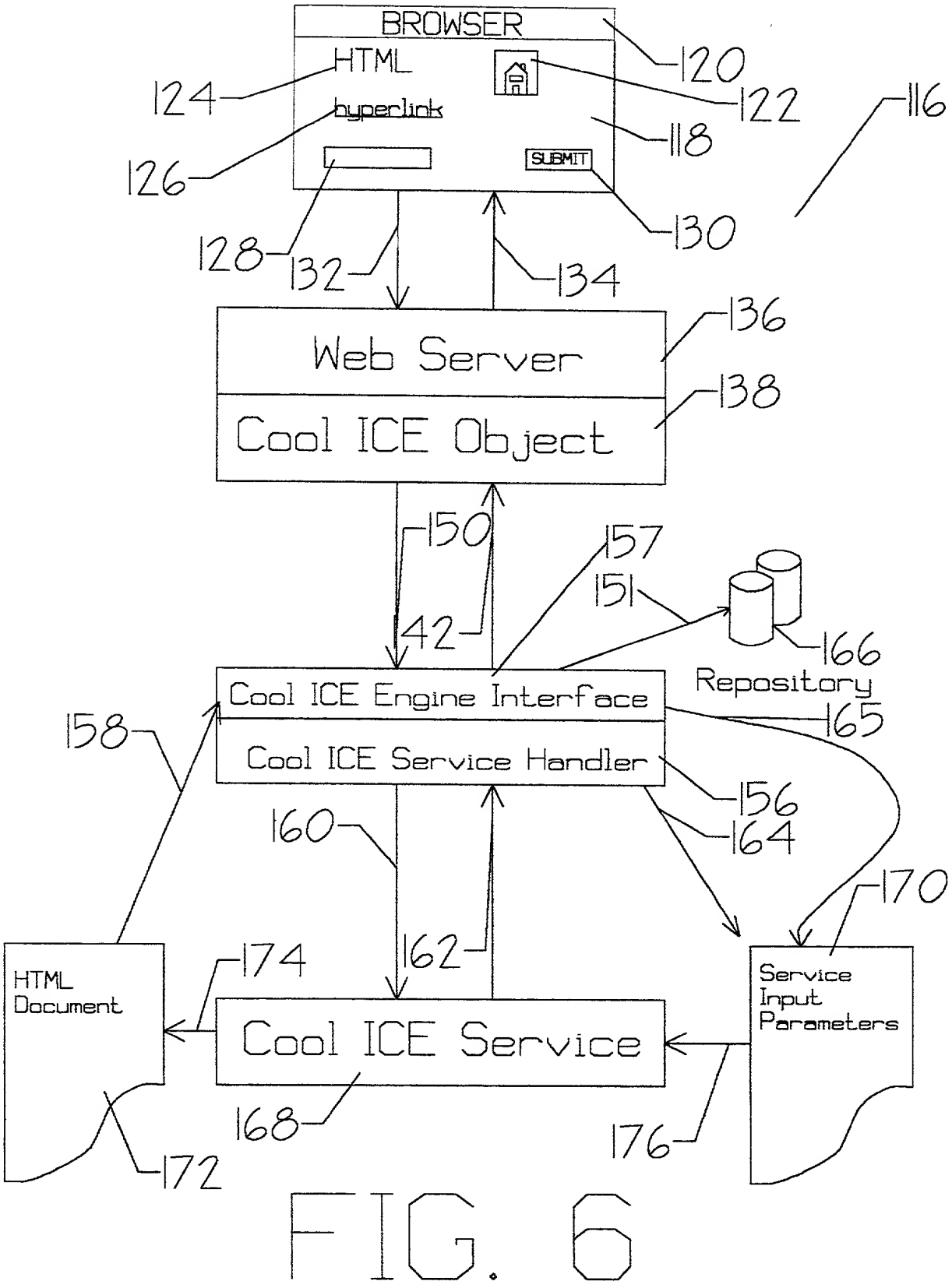
BROWSER
HTML
hyperlink
SUBMIT
120
122
124
126
116
118
128
130
132
134
Web Server
136
Cool ICE Object
138
150
157
151
42
166
Repository
Cool ICE Engine Interface
165
158
Cool ICE Service Handler
156
160
164
170
162
HTML Document
174
Service Input Parameters
Cool ICE Service
168
176
172

FIG. 6

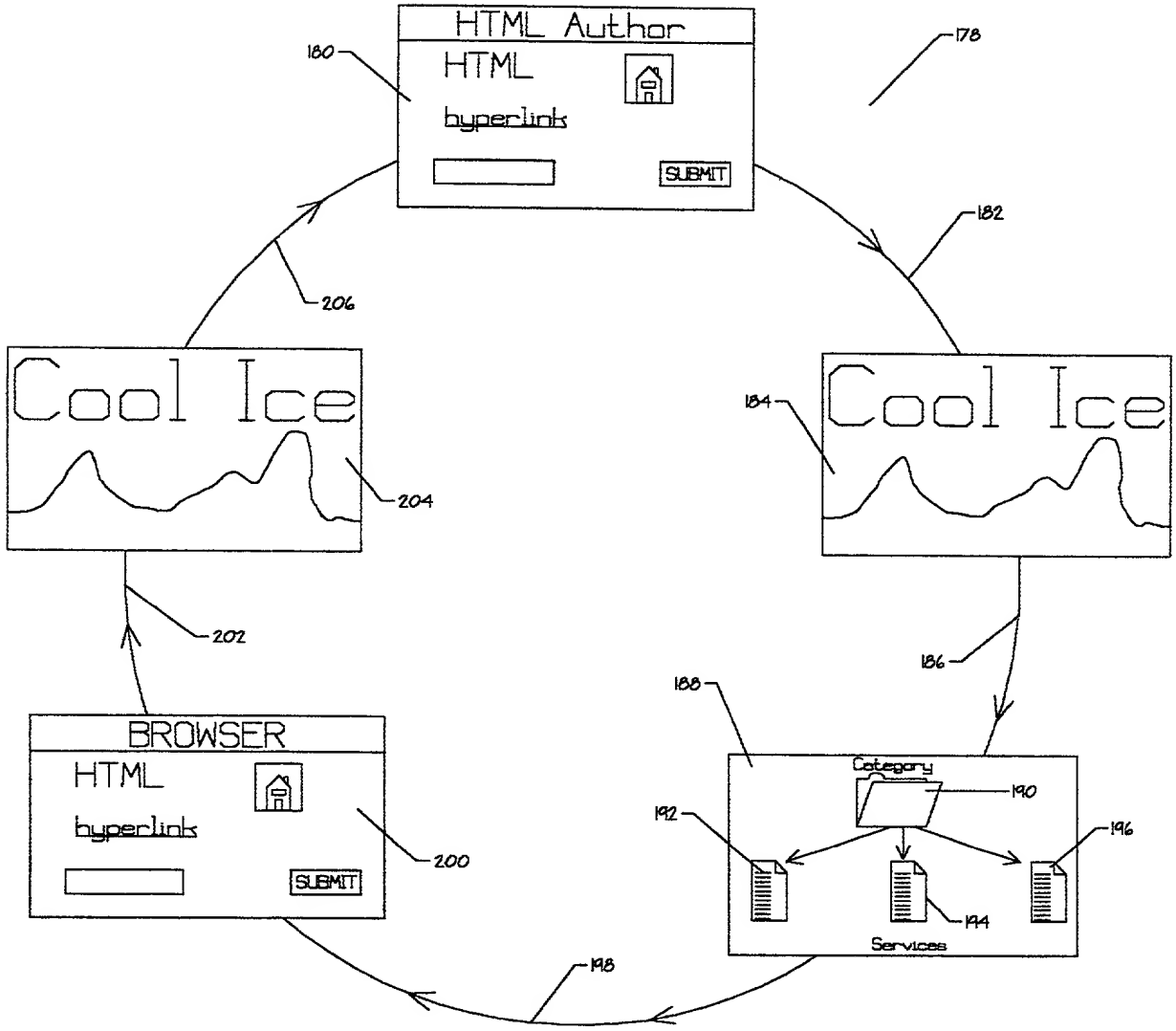
HTML Author
HTML
hyperlinks
SUBMIT
180
178
182
206
Cool Ice
204
Cool Ice
184
202
186
188
BROWSER
HTML
hyperlinks
SUBMIT
200
Category
190
192
196
194
Services
198

FIG. 7

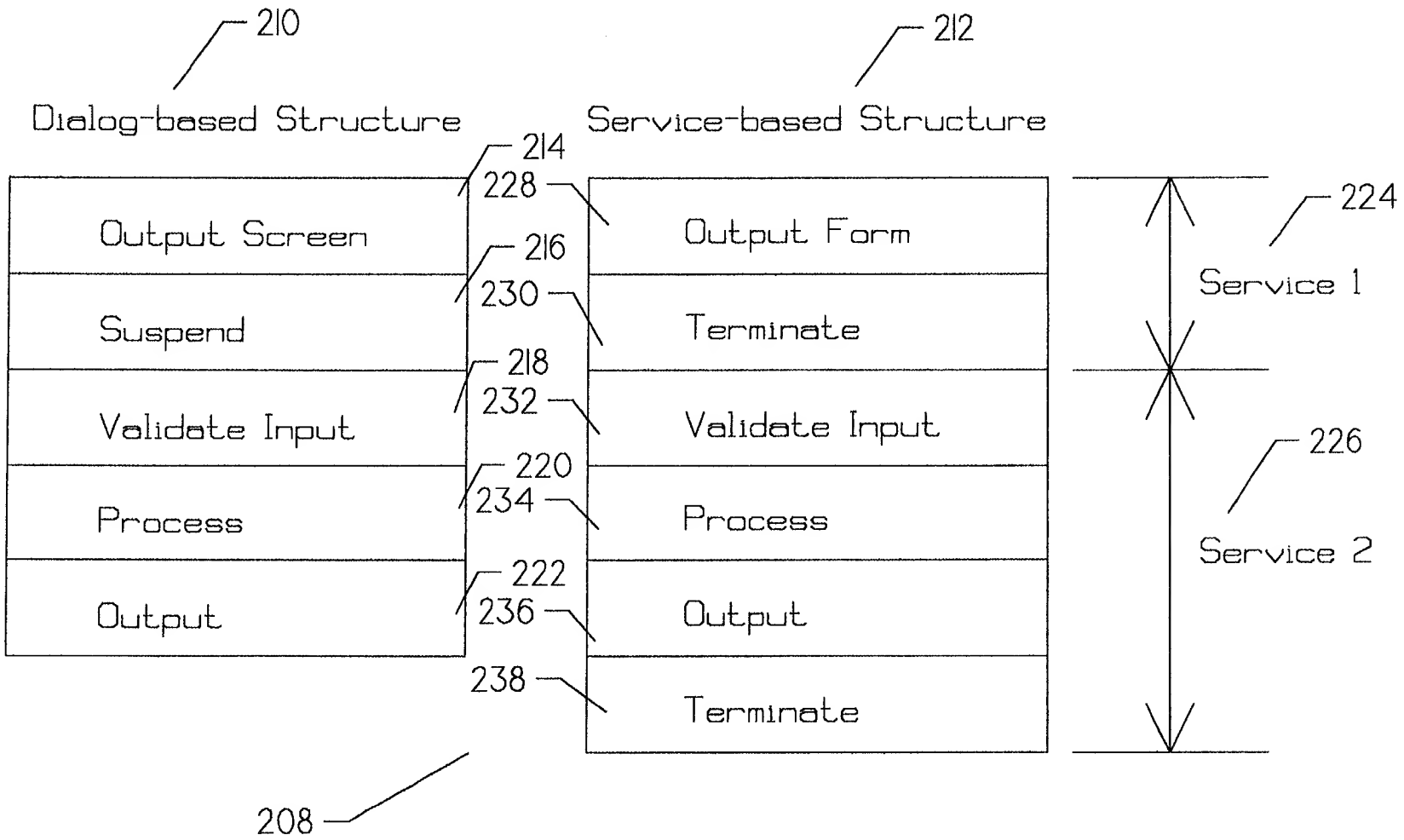
210
Dialog-based Structure
212
Service-based Structure
214
228
216
230
218
232
220
234
222
236
238
Output Screen
Suspend
Validate Input
Process
Output
Output Form
Terminate
Validate Input
Process
Output
Terminate
224
Service 1
226
Service 2
208

FIG. 8

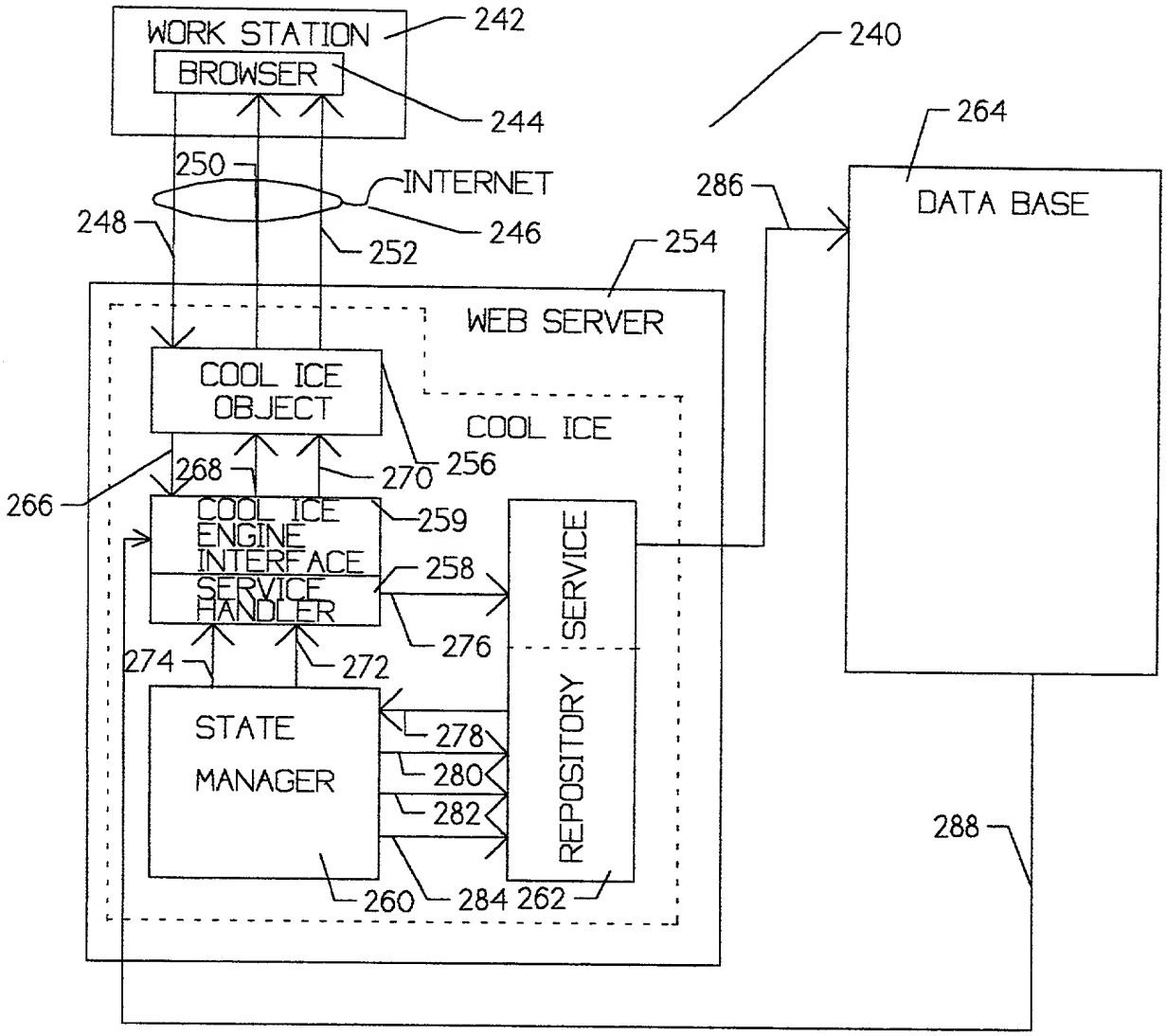
WORK STATION
242
BROWSER
244
240
264
250
INTERNET
286
DATA BASE
248
246
252
254
WEB SERVER
COOL ICE OBJECT
COOL ICE
256
268
270
266
COOL ICE ENGINE INTERFACE
259
SERVICE HANDLER
258
SERVICE
276
274
272
STATE MANAGER
278
280
282
REPOSITORY
288
260
284
262

FIG. 9

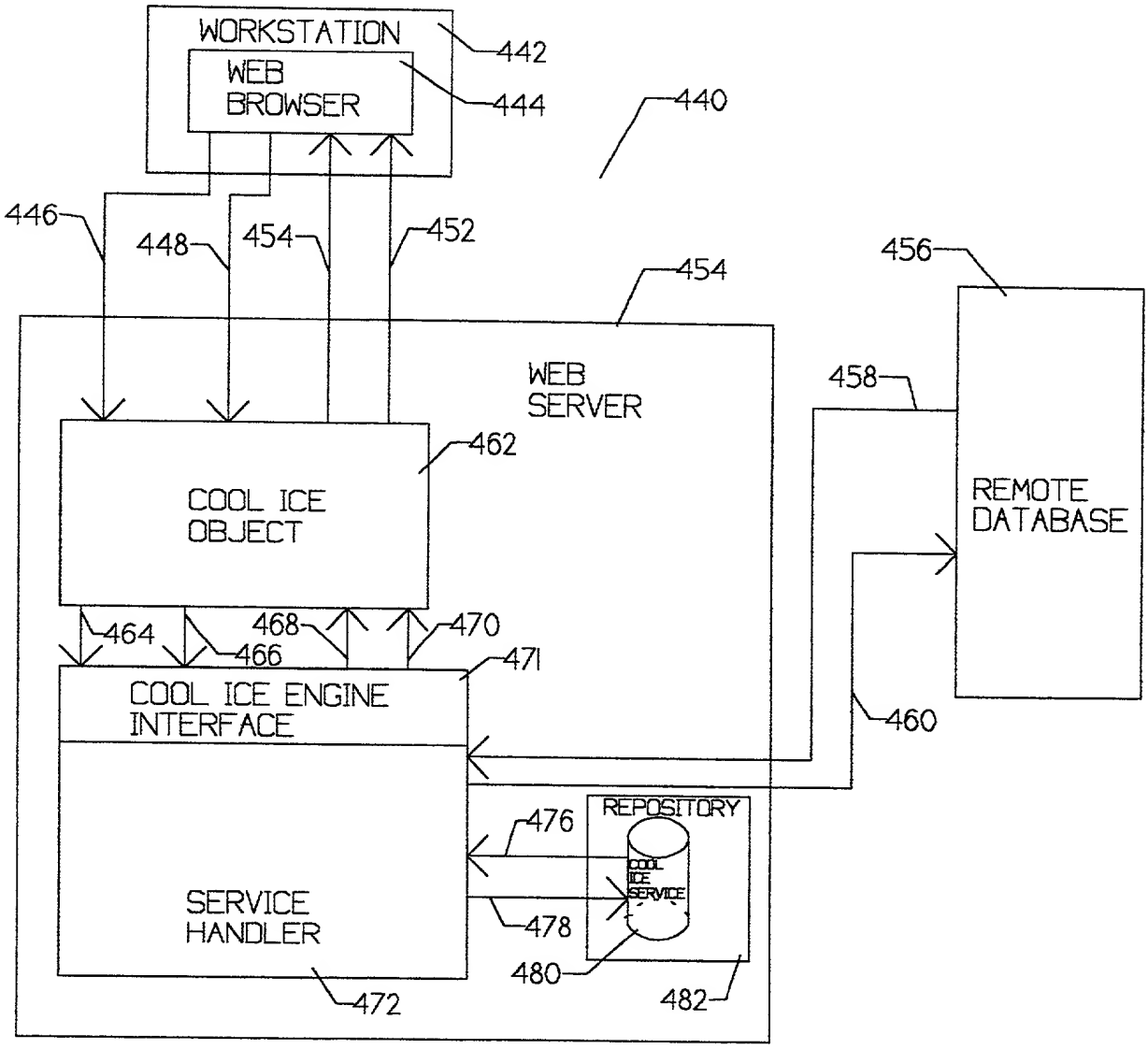
WORKSTATION
WEB BROWSER
442
444
440
446
448
454
452
454
456
WEB SERVER
458
462
COOL ICE OBJECT
REMOTE DATABASE
464
466
468
470
471
COOL ICE ENGINE INTERFACE
460
REPOSITORY
476
COOL ICE SERVICE
SERVICE HANDLER
478
480
482
472

FIG. 10

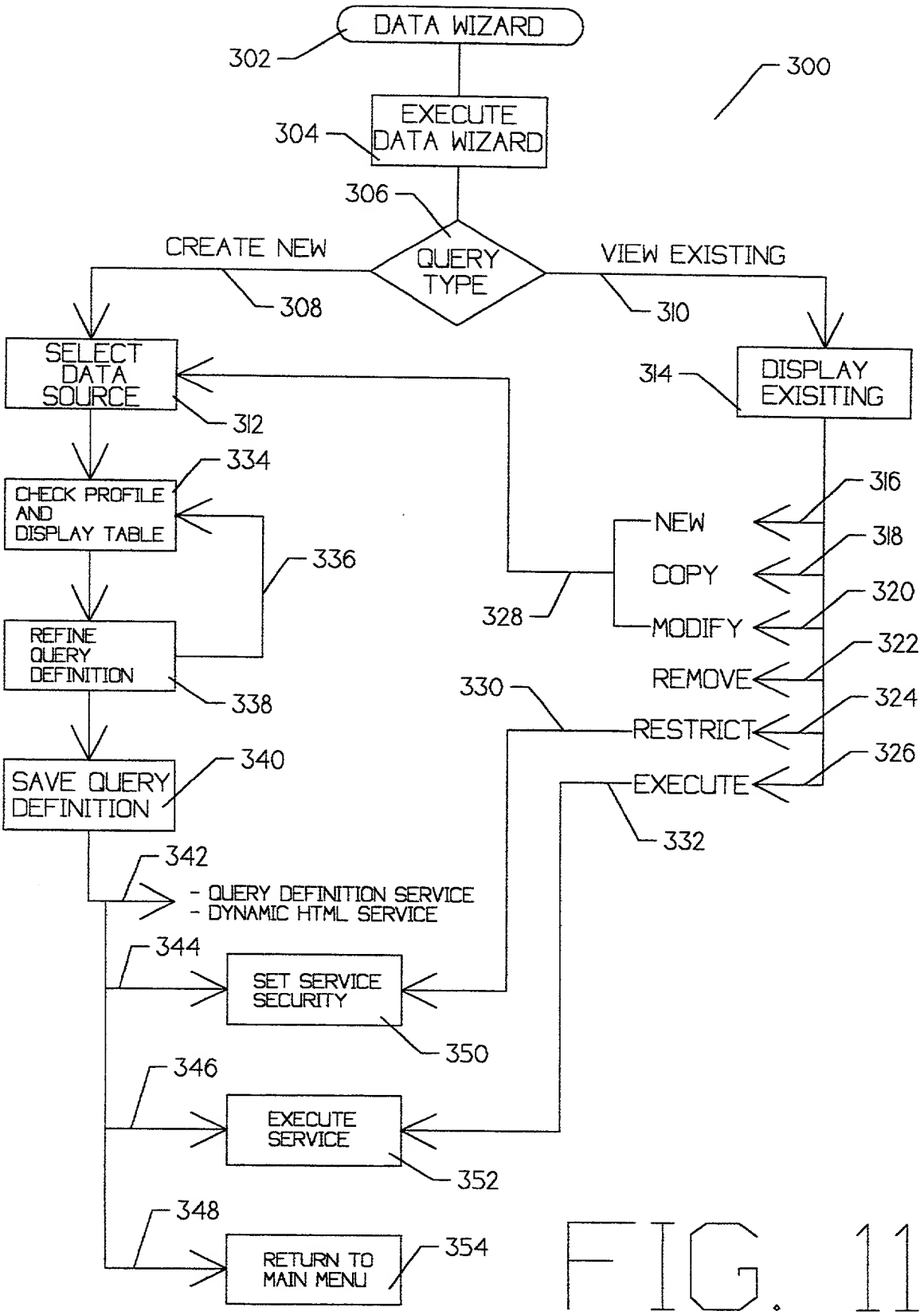
DATA WIZARD
302
300
EXECUTE DATA WIZARD
304
306
QUERY TYPE
CREATE NEW
308
VIEW EXISTING
310
SELECT DATA SOURCE
312
DISPLAY EXISITING
314
CHECK PROFILE AND DISPLAY TABLE
334
336
REFINE QUERY DEFINITION
338
SAVE QUERY DEFINITION
340
NEW
COPY
MODIFY
REMOVE
RESTRICT
EXECUTE
316
318
320
322
324
326
328
330
332
342
- QUERY DEFINITION SERVICE
- DYNAMIC HTML SERVICE
344
SET SERVICE SECURITY
350
346
EXECUTE SERVICE
352
348
RETURN TO MAIN MENU
354

FIG. 11

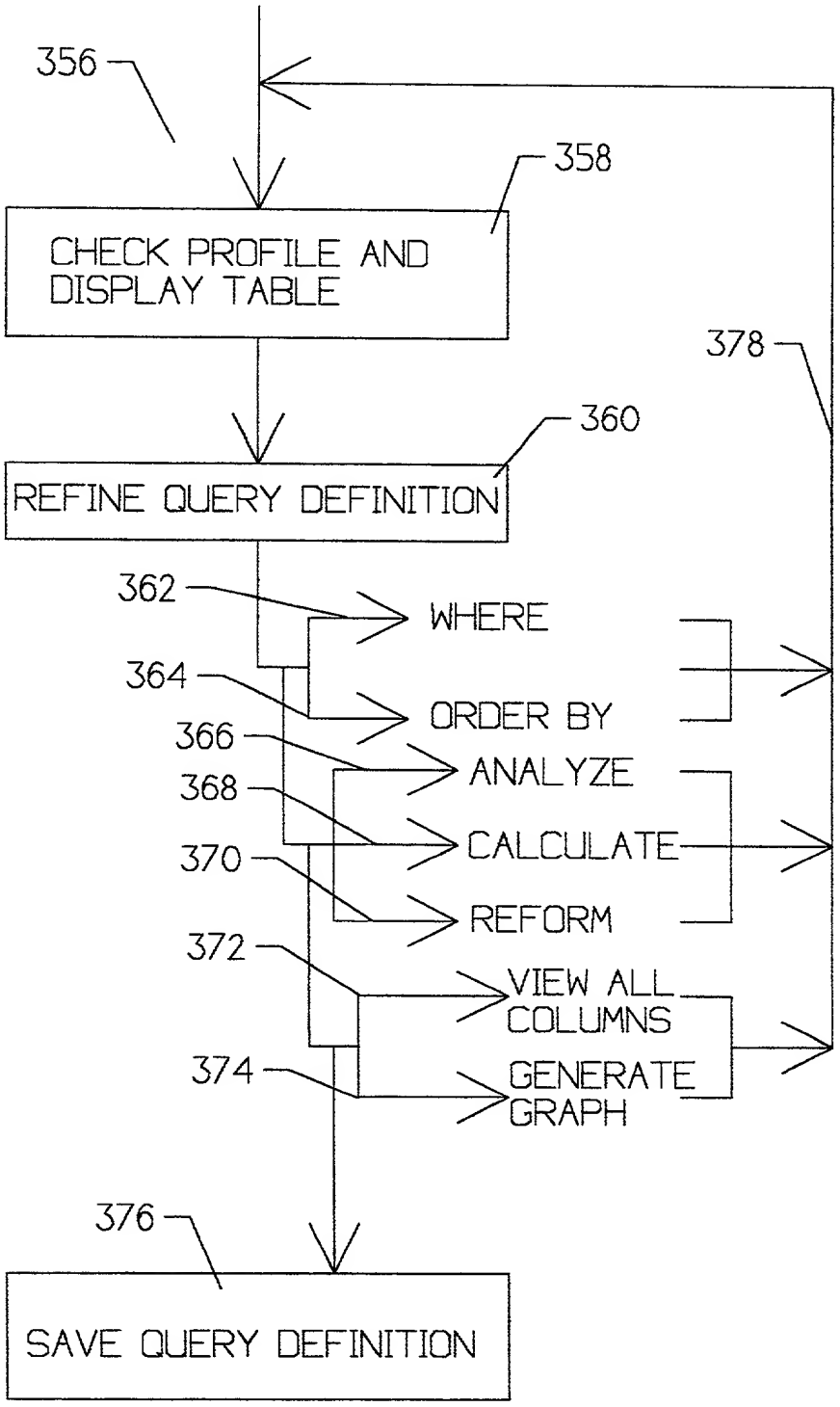
356
358
CHECK PROFILE AND DISPLAY TABLE
378
360
REFINE QUERY DEFINITION
362
WHERE
364
ORDER BY
366
ANALYZE
368
CALCULATE
370
REFORM
372
VIEW ALL COLUMNS
374
GENERATE GRAPH
376
SAVE QUERY DEFINITION

FIG. 12

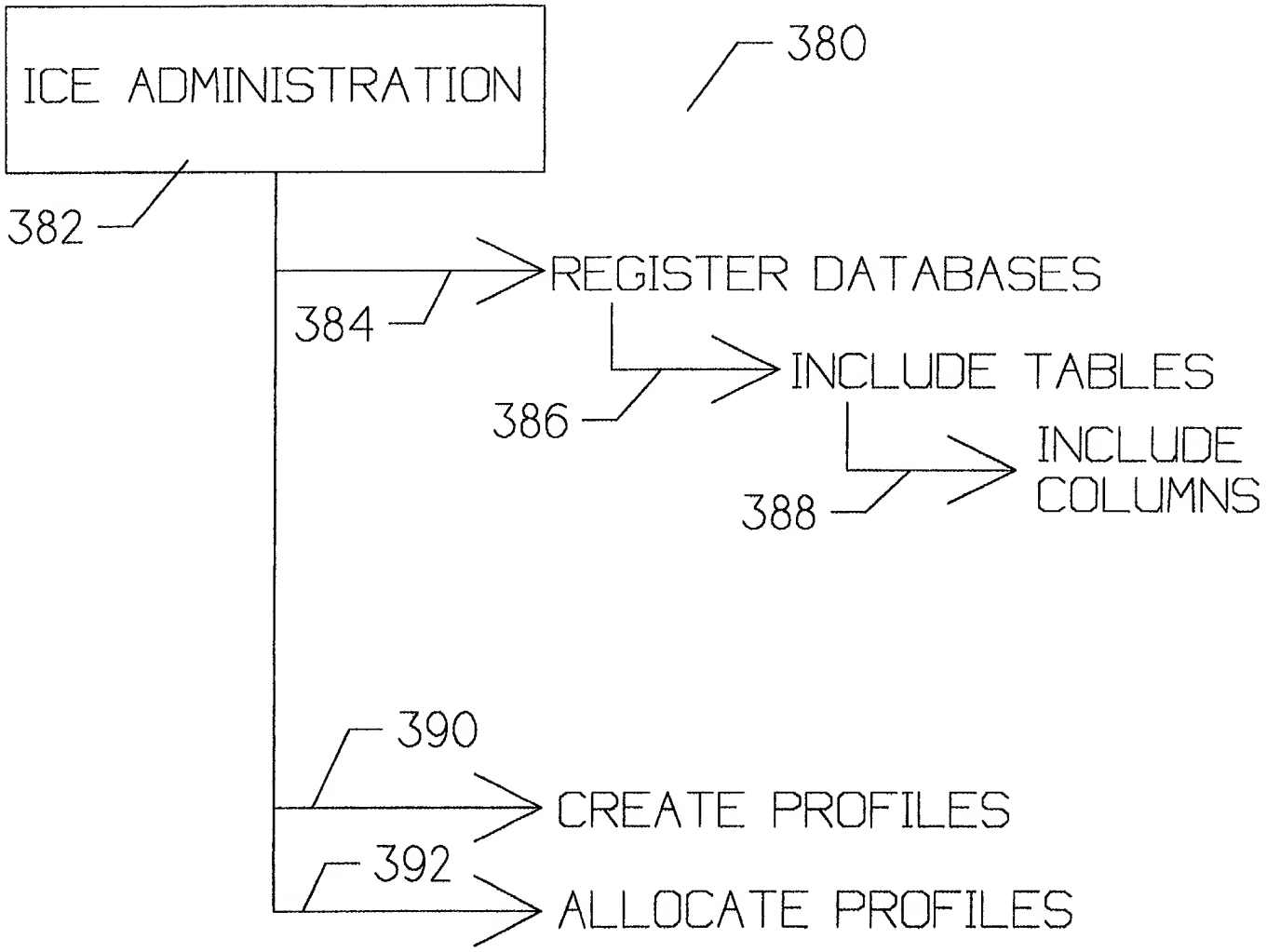
ICE ADMINISTRATION
380
382
REGISTER DATABASES
384
INCLUDE TABLES
386
INCLUDE COLUMNS
388
390
CREATE PROFILES
392
ALLOCATE PROFILES

FIG. 13

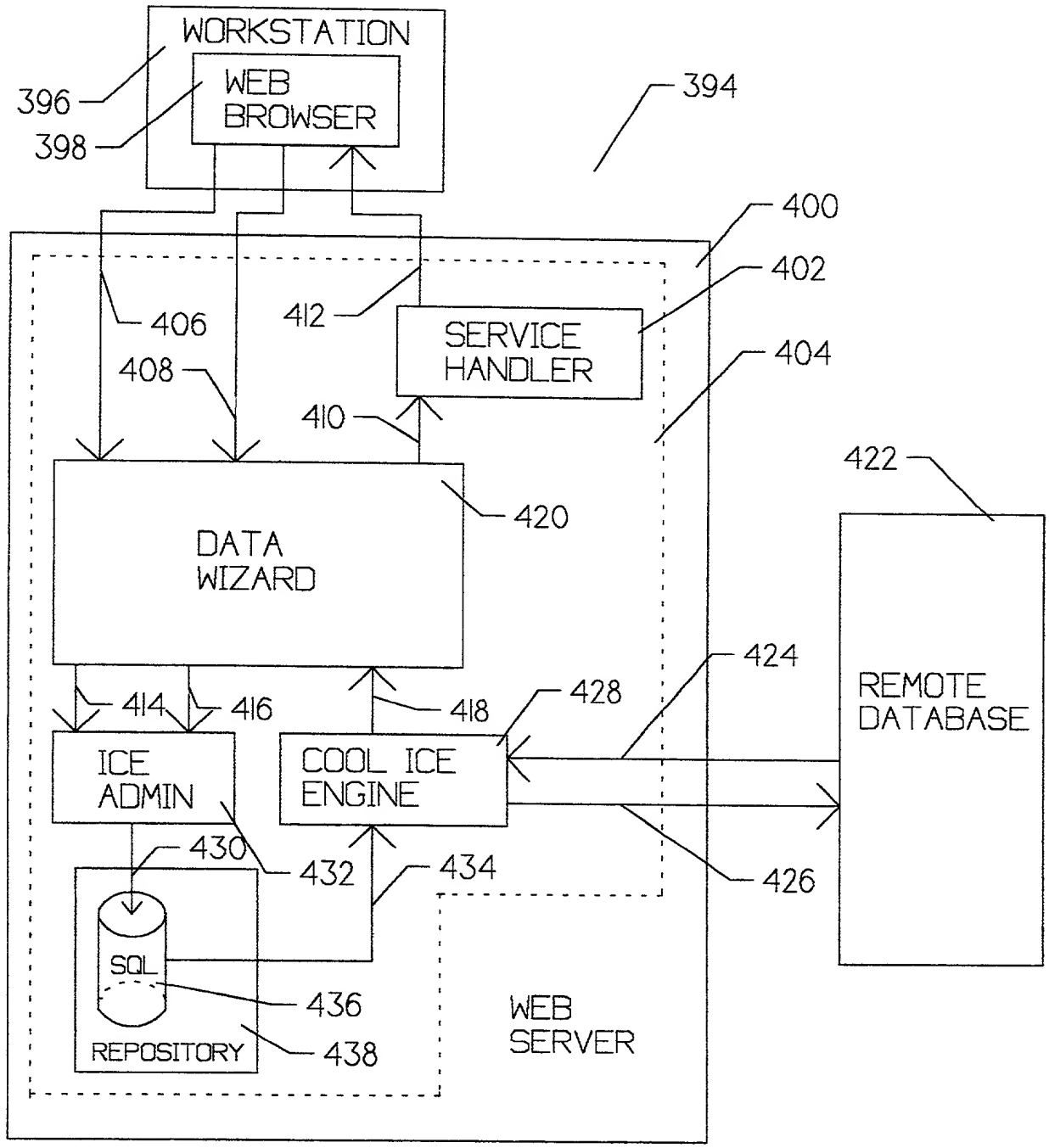
WORKSTATION
WEB BROWSER
396
398
394
400
402
406
412
SERVICE HANDLER
404
408
410
422
DATA WIZARD
420
REMOTE DATABASE
424
414
416
418
428
ICE ADMIN
COOL ICE ENGINE
430
432
434
426
SQL
436
WEB SERVER
REPOSITORY
438

FIG. 14

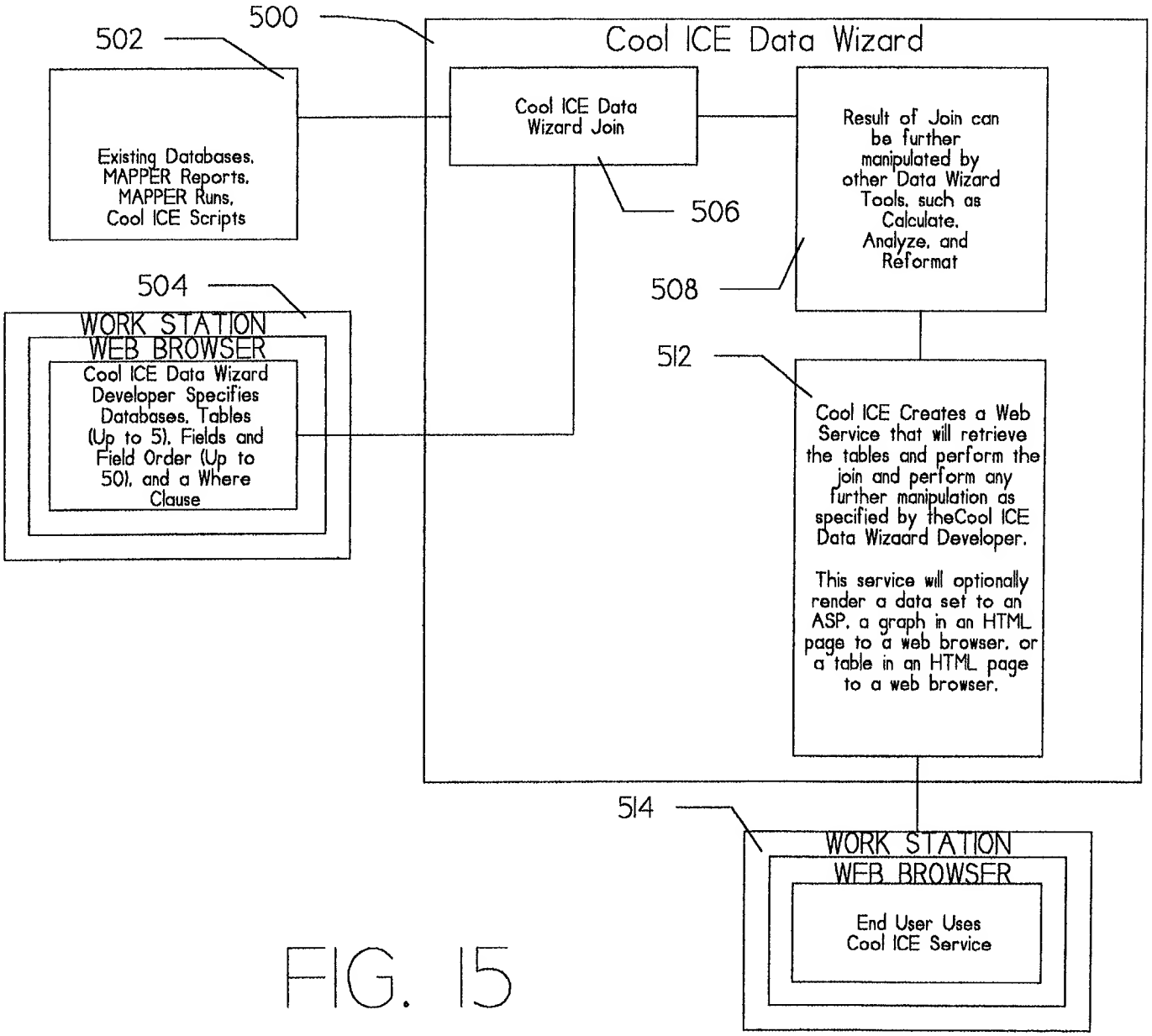
500
Cool ICE Data Wizard
502
Existing Databases,
MAPPER Reports,
MAPPER Runs,
Cool ICE Scripts
Cool ICE Data
Wizard Join
506
Result of Join can
be further
manipulated by
other Data Wizard
Tools, such as
Calculate,
Analyze, and
Reformat
508
504
WORK STATION
WEB BROWSER
Cool ICE Data Wizard
Developer Specifies
Databases, Tables
(Up to 5), Fields and
Field Order (Up to
50), and a Where
Clause
512
Cool ICE Creates a Web
Service that will retrieve
the tables and perform the
join and perform any
further manipulation as
specified by theCool ICE
Data Wizaard Developer.
This service will optionally
render a data set to an
ASP, a graph in an HTML
page to a web browser, or
a table in an HTML page
to a web browser.
514
WORK STATION
WEB BROWSER
End User Uses
Cool ICE Service

FIG. 15

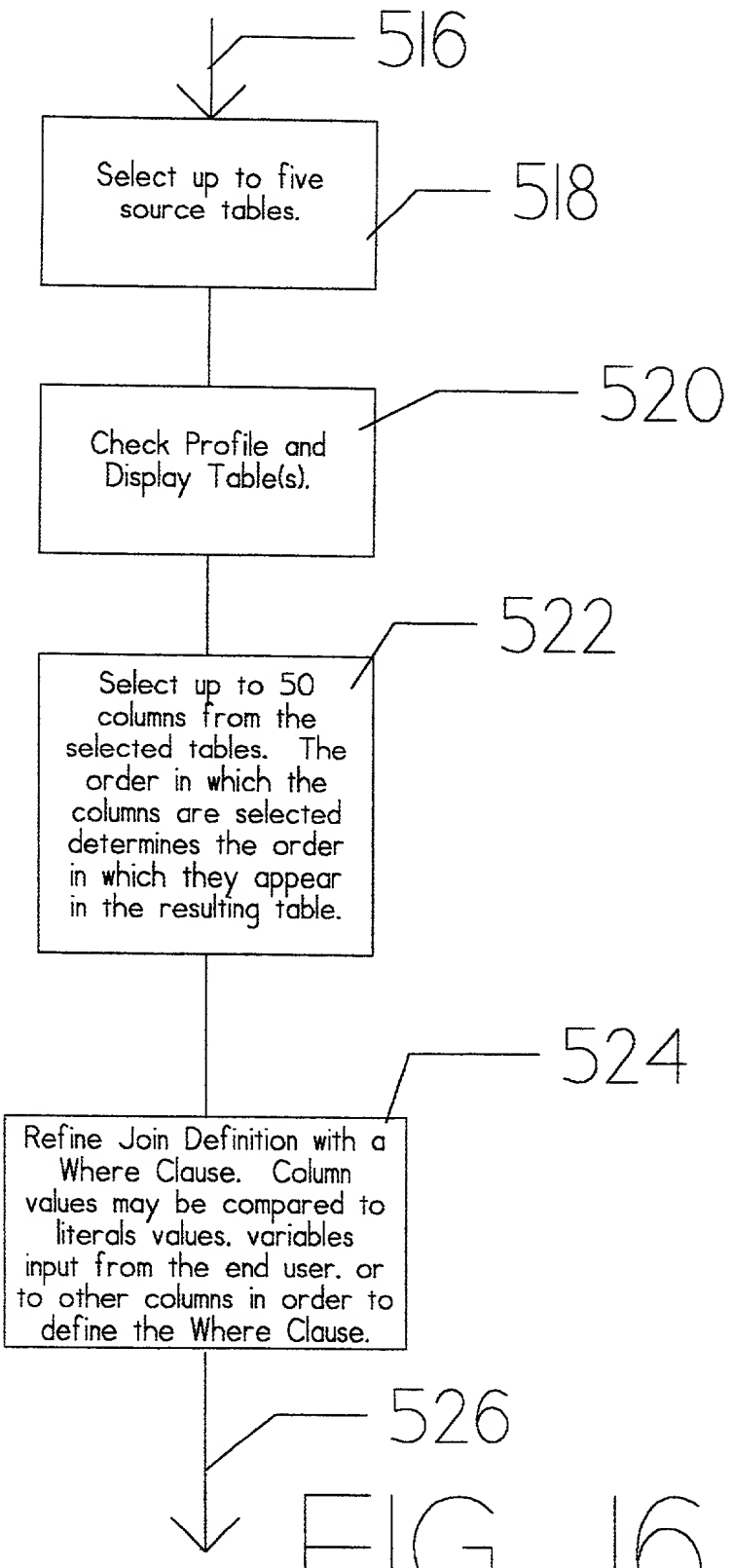
516
Select up to five source tables.
518
Check Profile and Display Table(s).
520
Select up to 50 columns from the selected tables. The order in which the columns are selected determines the order in which they appear in the resulting table.
522
Refine Join Definition with a Where Clause. Column values may be compared to literals values, variables input from the end user, or to other columns in order to define the Where Clause.
524
526

FIG. 16

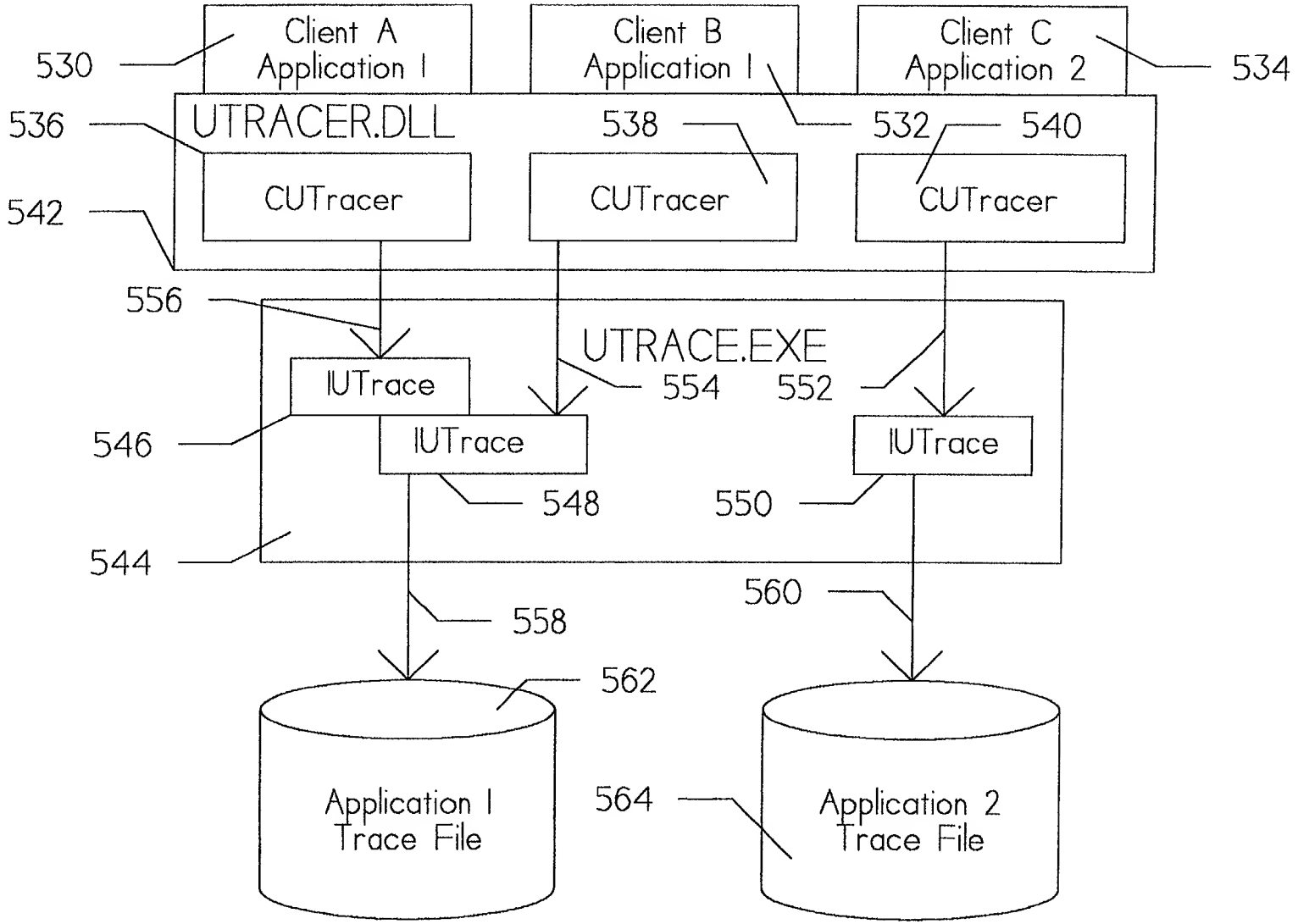
Client A
Application 1
Client B
Application 1
Client C
Application 2
530
534
536
UTRACER.DLL
538
532
540
CUTracer
CUTracer
CUTracer
542
556
UTRACE.EXE
IUTrace
554
552
546
IUTrace
IUTrace
548
550
544
560
558
562
Application 1
Trace File
564
Application 2
Trace File

FIG. 17

HKLM\SOFTWARE\UNISYS\UTRACE

APPNAME -- Subkey matching the name of the application 565

- ENABLETRACE -- DWORD value indication a Boolean (1=trace.. 0=no trace).
- MAXENTRIES -- DWORD value indicating the maximum number of entries in the trace file. If missing. then no upper limit is imposed.
- FORMATFLAGS -- DWORD value indicating message formatting flags.
- POLICYFLAGS -- DWORD value indicating trace policy flags set for the application.
- TRACELEVEL -- DWORD value indicating a trace level. 0 = no trace.
- TRACEPATH -- String value indicating the directory path for the trace files.
- REGTRACE -- A string value containing the HKLM\Software sub key to trace for this application. Blank or missing for no registry trace.
- COMPONENT -- A subkey for a specific component of the application.
  - POLICYFLAGS -- Value indicating component level trace policy flags
  - TRACELEVEL -- DWORD Value indicating a trace level. 0 = no trace.
  - VERSIONTRACE-- String value specifying executable component name for version information tracing.

FIG. 18

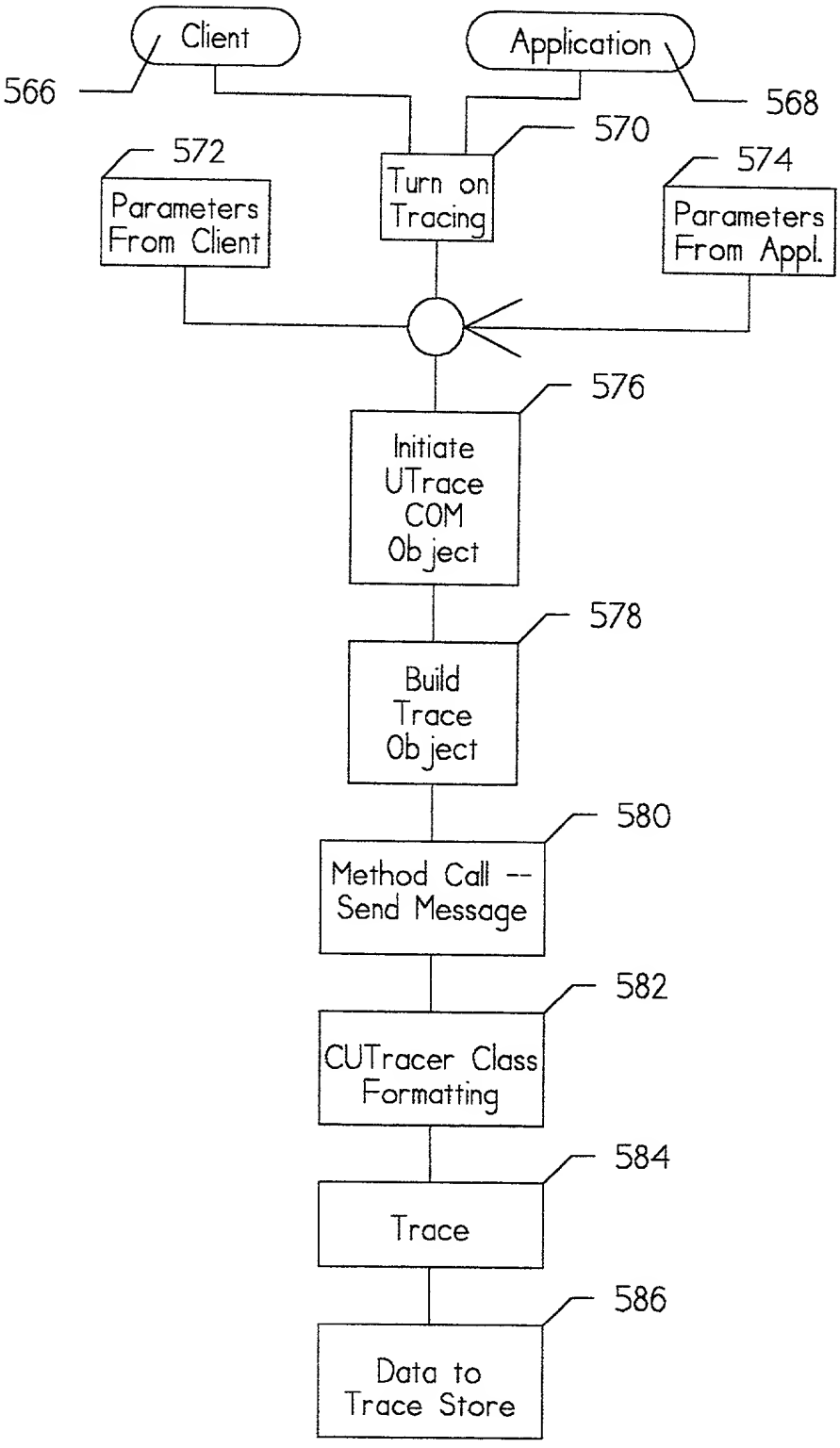
Client
Application
566
568
572
570
574
Parameters From Client
Turn on Tracing
Parameters From Appl.
576
Initiate UTrace COM Object
578
Build Trace Object
580
Method Call -- Send Message
582
CUTracer Class Formatting
584
Trace
586
Data to Trace Store

FIG. 19

```
#define CI_TRACE_VERSION        0xl
#define CI_TRACE_ERROR          0x2
#define CI_TRACE_INTERFACE      0x4
#define CI_TRACE_FLOW           0x8
#define CI_TRACE_DETAIL         0xl0
```

FIG. 20A

```
if (m_trace. Active(C)_TRACE_DETAIL))
m_trace<<"MY Detailed Trace information"<<Localvariable<<traceit
```

FIG. 20B

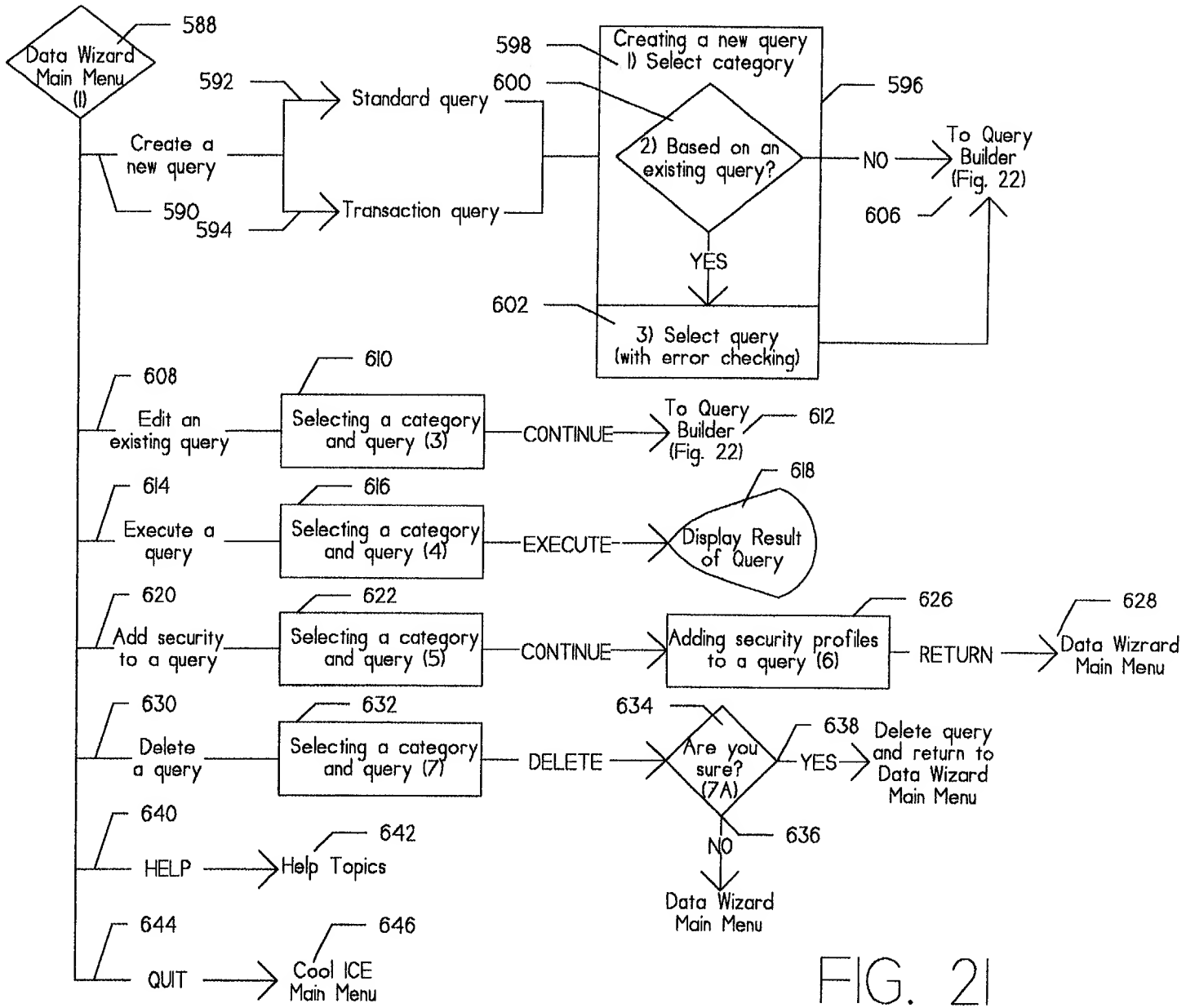
588
Data Wizard Main Menu (1)
592
Standard query
Create a new query
590
594
Transaction query
598
Creating a new query 1) Select category
600
2) Based on an existing query?
596
NO
To Query Builder (Fig. 22)
606
YES
602
3) Select query (with error checking)
608
Edit an existing query
610
Selecting a category and query (3)
CONTINUE
To Query Builder (Fig. 22)
612
614
Execute a query
616
Selecting a category and query (4)
EXECUTE
618
Display Result of Query
620
Add security to a query
622
Selecting a category and query (5)
CONTINUE
626
Adding security profiles to a query (6)
RETURN
628
Data Wizrard Main Menu
630
Delete a query
632
Selecting a category and query (7)
DELETE
634
Are you sure? (7A)
638
YES
Delete query and return to Data Wizard Main Menu
636
NO
Data Wizard Main Menu
640
HELP
642
Help Topics
644
QUIT
646
Cool ICE Main Menu

FIG. 21

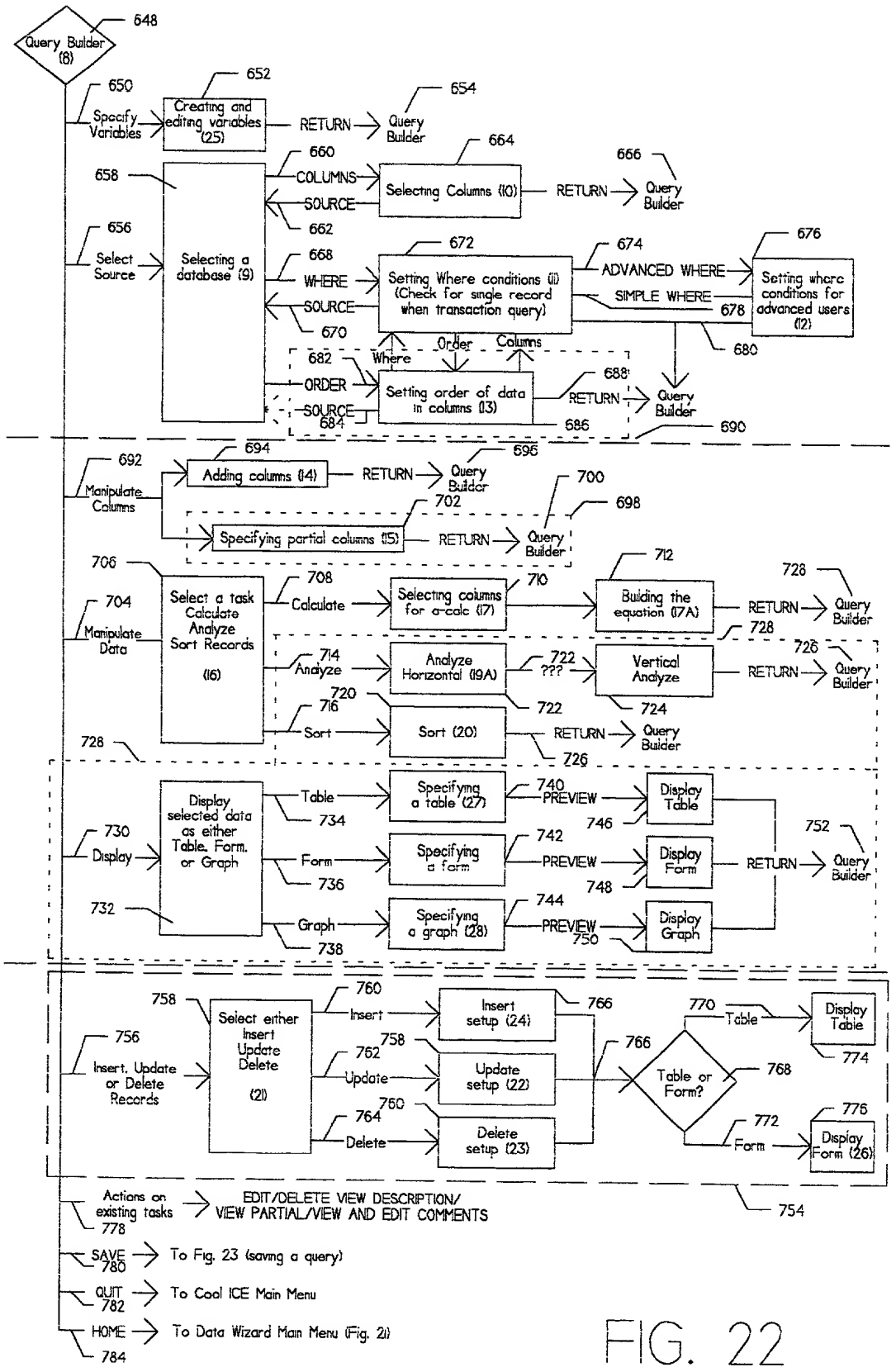
Query Builder (8)
648
650
Specify Variables
652
Creating and editing variables (25)
RETURN
654
Query Builder
656
Select Source
658
Selecting a database (9)
660
COLUMNS
SOURCE
662
664
Selecting Columns (10)
RETURN
666
Query Builder
668
WHERE
SOURCE
670
672
Setting Where conditions (11) (Check for single record when transaction query)
674
ADVANCED WHERE
SIMPLE WHERE
676
Setting where conditions for advanced users (12)
678
680
Where
Order
Columns
682
ORDER
SOURCE
684
Setting order of data in columns (13)
688
RETURN
Query Builder
686
690
692
Manipulate Columns
694
Adding columns (14)
RETURN
696
Query Builder
698
700
702
Specifying partial columns (15)
RETURN
Query Builder
704
Manipulate Data
706
Select a task
Calculate
Analyze
Sort Records
(16)
708
Calculate
Selecting columns for a-calc (17)
710
712
Building the equation (17A)
RETURN
728
Query Builder
714
Analyze
Analyze Horizontal (19A)
722
???
Vertical Analyze
RETURN
726
Query Builder
716
Sort
Sort (20)
720
RETURN
Query Builder
724
728
730
Display
Display selected data as either Table, Form, or Graph
732
Table
734
Specifying a table (27)
740
PREVIEW
Display Table
746
752
Form
736
Specifying a form
742
PREVIEW
Display Form
748
RETURN
Query Builder
Graph
738
Specifying a graph (28)
744
PREVIEW
750
Display Graph
756
Insert, Update or Delete Records
758
Select either Insert Update Delete
(21)
760
Insert
Insert setup (24)
766
762
Update
Update setup (22)
764
Delete
Delete setup (23)
770
Table
Display Table
774
Table or Form?
768
772
Form
Display Form (26)
776
754
Actions on existing tasks
778
EDIT/DELETE VIEW DESCRIPTION/ VIEW PARTIAL/VIEW AND EDIT COMMENTS
SAVE
780
To Fig. 23 (saving a query)
QUIT
782
To Cool ICE Main Menu
HOME
784
To Data Wizard Main Menu (Fig. 2)

FIG. 22

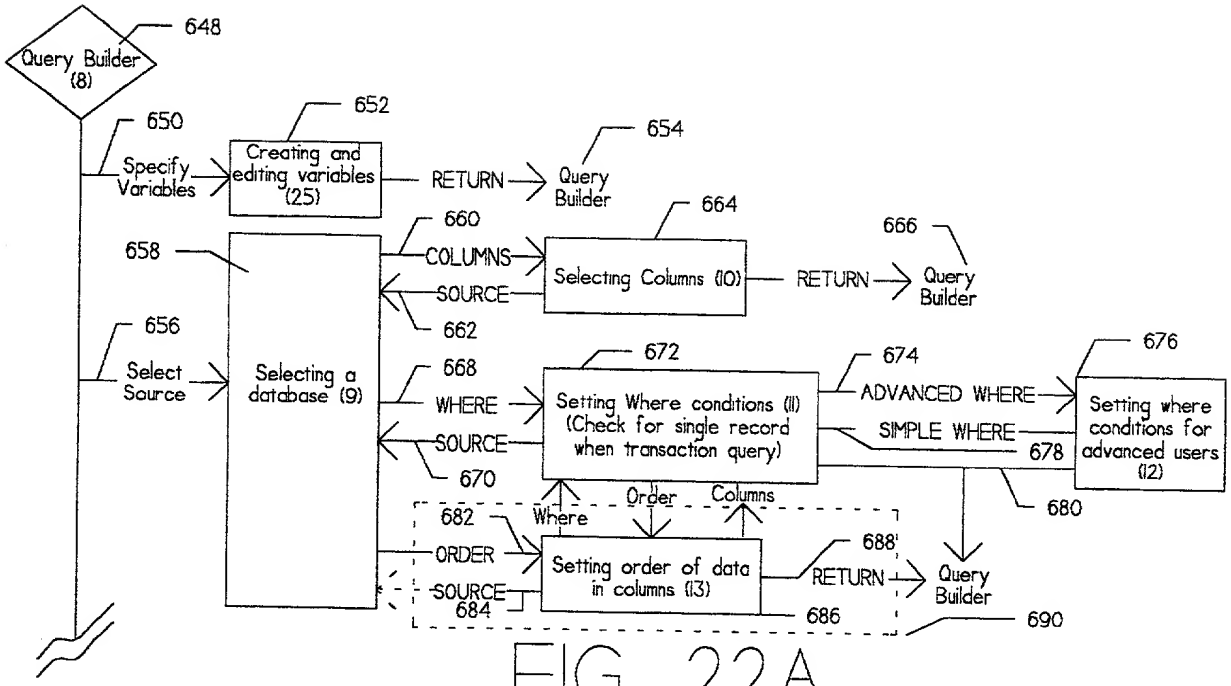
Query Builder (8)
648
650
Specify Variables
652
Creating and editing variables (25)
RETURN
654
Query Builder
658
660
COLUMNS
SOURCE
662
664
Selecting Columns (10)
RETURN
666
Query Builder
656
Select Source
Selecting a database (9)
668
WHERE
SOURCE
670
672
Setting Where conditions (11) (Check for single record when transaction query)
674
ADVANCED WHERE
SIMPLE WHERE
678
676
Setting where conditions for advanced users (12)
680
Order
Columns
Where
682
ORDER
SOURCE
684
Setting order of data in columns (13)
688
RETURN
Query Builder
686
690

FIG. 22A

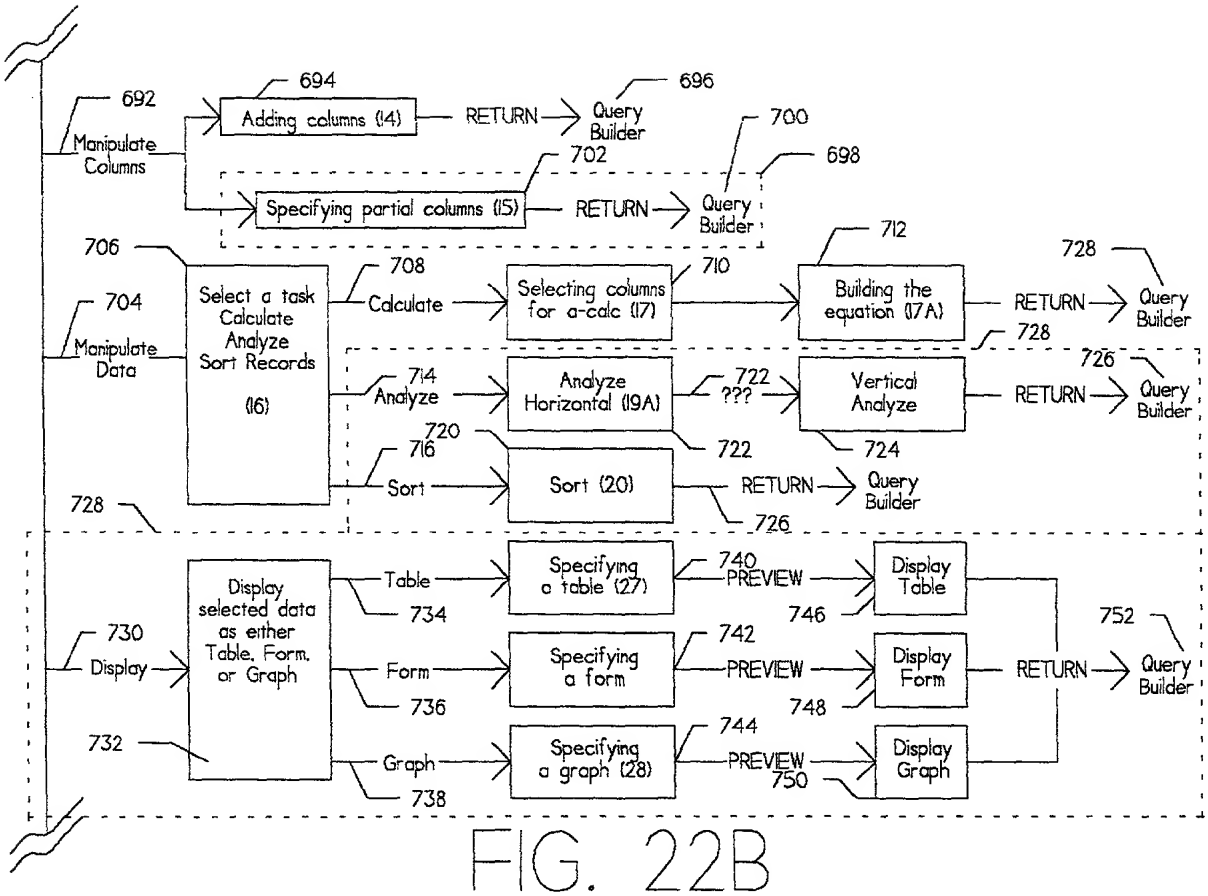
692
Manipulate Columns
694
Adding columns (14)
RETURN
696
Query Builder
700
698
702
Specifying partial columns (15)
RETURN
Query Builder
706
704
Manipulate Data
Select a task
Calculate
Analyze
Sort Records
(16)
708
Calculate
Selecting columns for a-calc (17)
710
712
Building the equation (17A)
RETURN
728
Query Builder
728
714
Analyze
Analyze Horizontal (19A)
722
???
Vertical Analyze
RETURN
726
Query Builder
722
724
720
716
Sort
Sort (20)
RETURN
Query Builder
726
728
730
Display
Display selected data as either Table, Form, or Graph
732
Table
734
Specifying a table (27)
740
PREVIEW
Display Table
746
Form
736
Specifying a form
742
PREVIEW
Display Form
748
RETURN
752
Query Builder
Graph
738
Specifying a graph (28)
744
PREVIEW
750
Display Graph

FIG. 22B

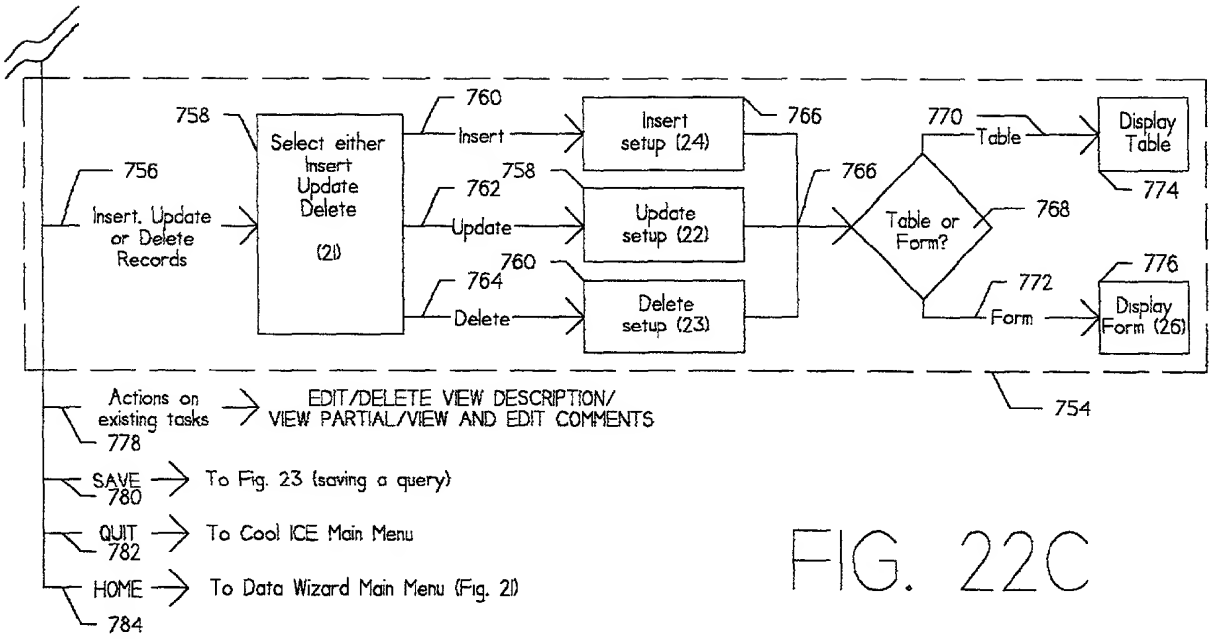
758
Select either
Insert
Update
Delete
(21)
760
Insert
Insert
setup (24)
766
770
Table
Display
Table
774
756
Insert, Update
or Delete
Records
758
762
Update
Update
setup (22)
766
Table or
Form?
768
760
764
Delete
Delete
setup (23)
772
Form
776
Display
Form (26)
754
Actions on
existing tasks
778
EDIT/DELETE VIEW DESCRIPTION/
VIEW PARTIAL/VIEW AND EDIT COMMENTS
SAVE
780
To Fig. 23 (saving a query)
QUIT
782
To Cool ICE Main Menu
HOME
784
To Data Wizard Main Menu (Fig. 21)

FIG. 22C

PATENT APPLICATION

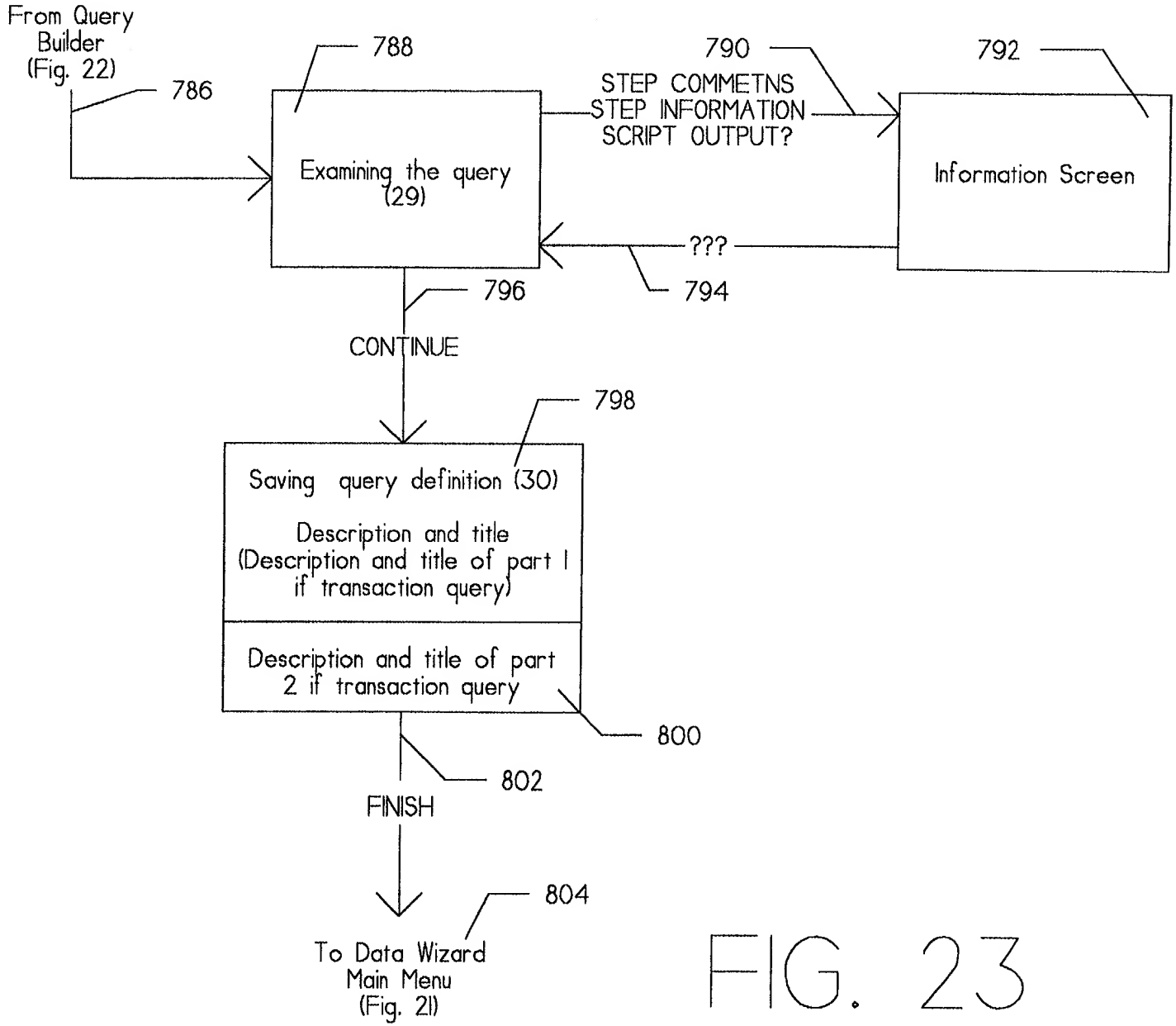

FIG. 23

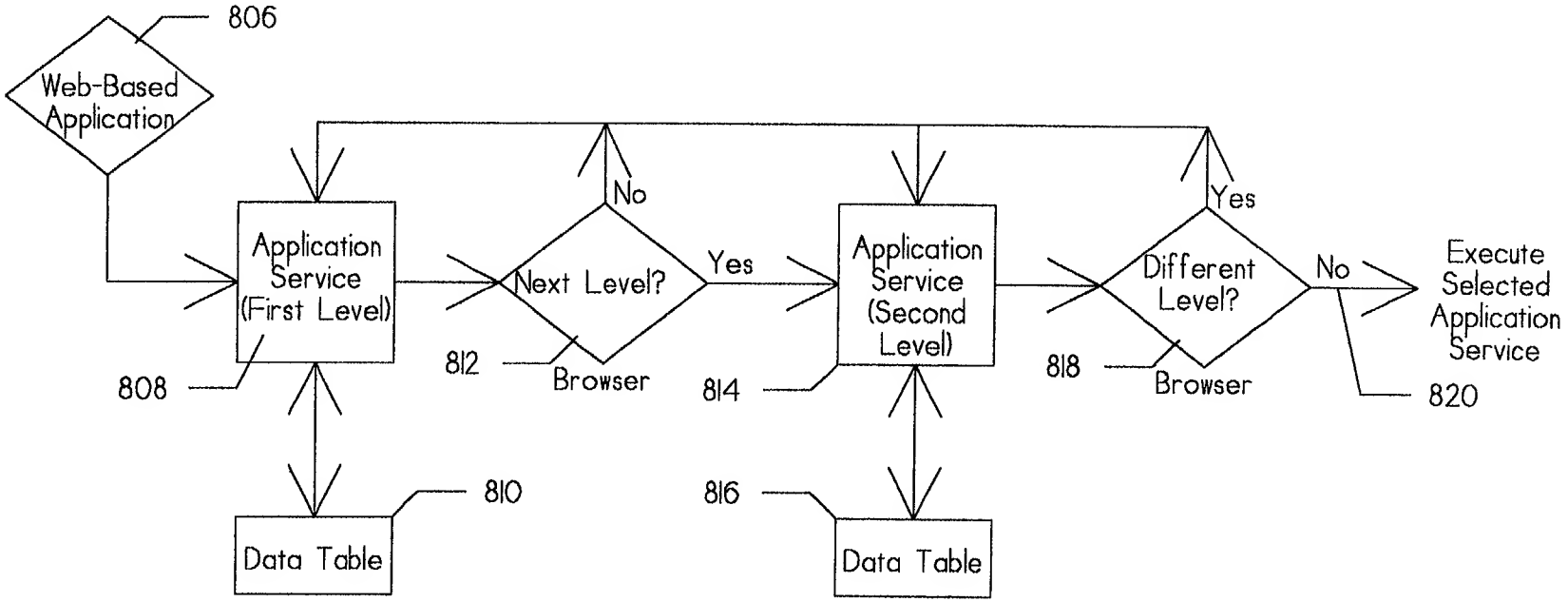
806
Web-Based Application
Application Service (First Level)
808
Next Level?
No
Yes
812
Browser
Data Table
810
Application Service (Second Level)
814
Different Level?
Yes
No
818
Browser
816
Data Table
Execute Selected Application Service
820

FIG. 24

PATENT APPLICATION

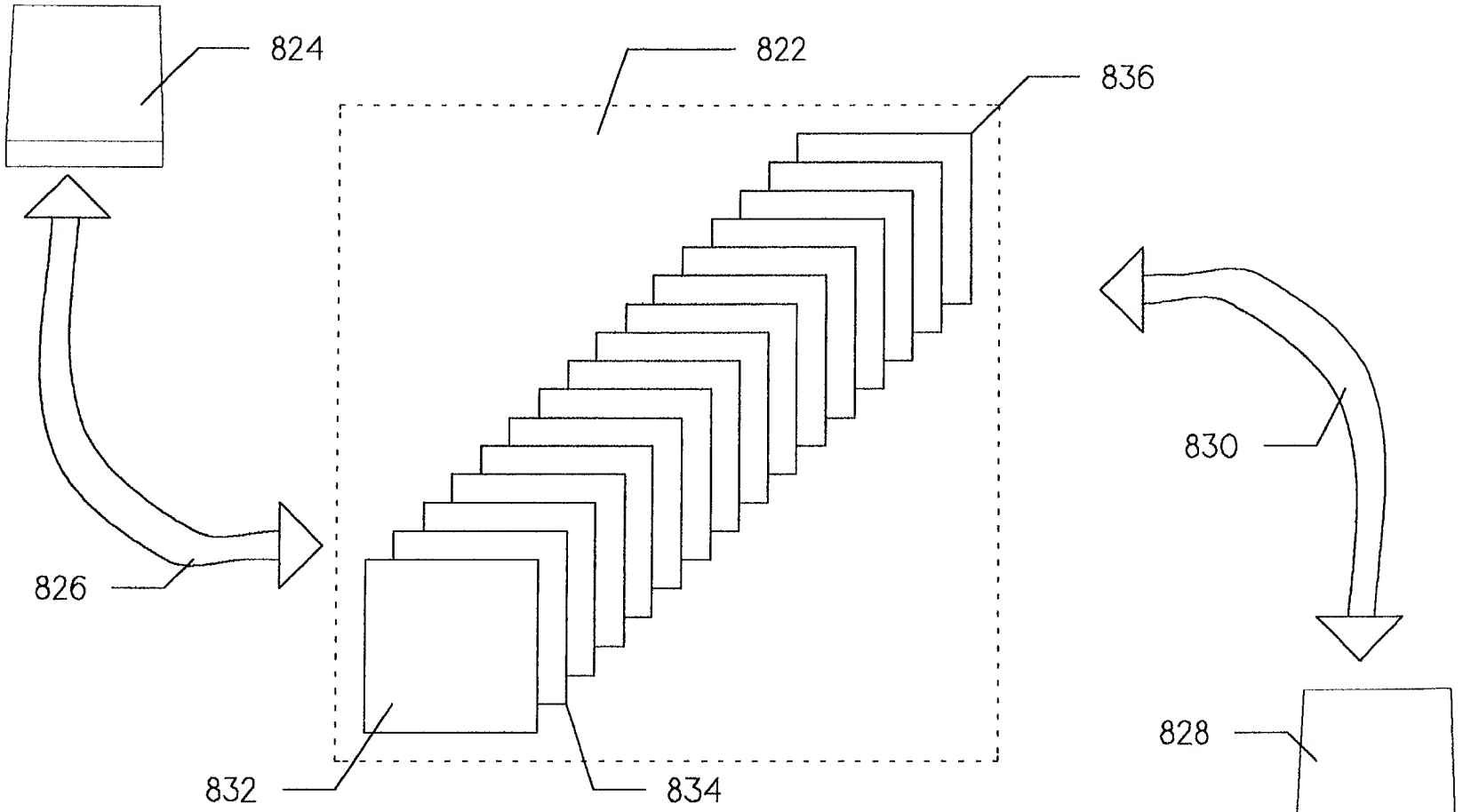

FIG. 25

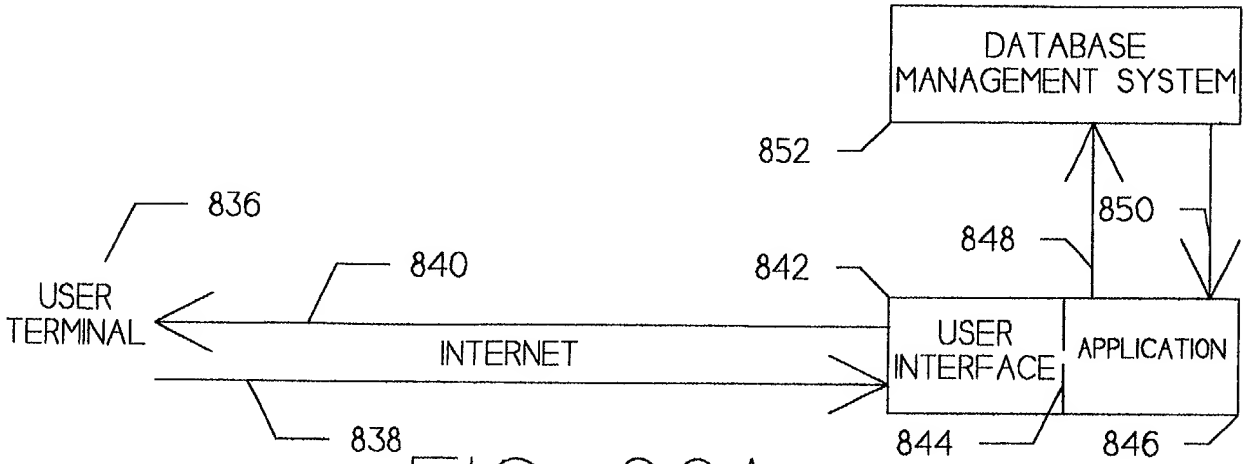

FIG. 26A

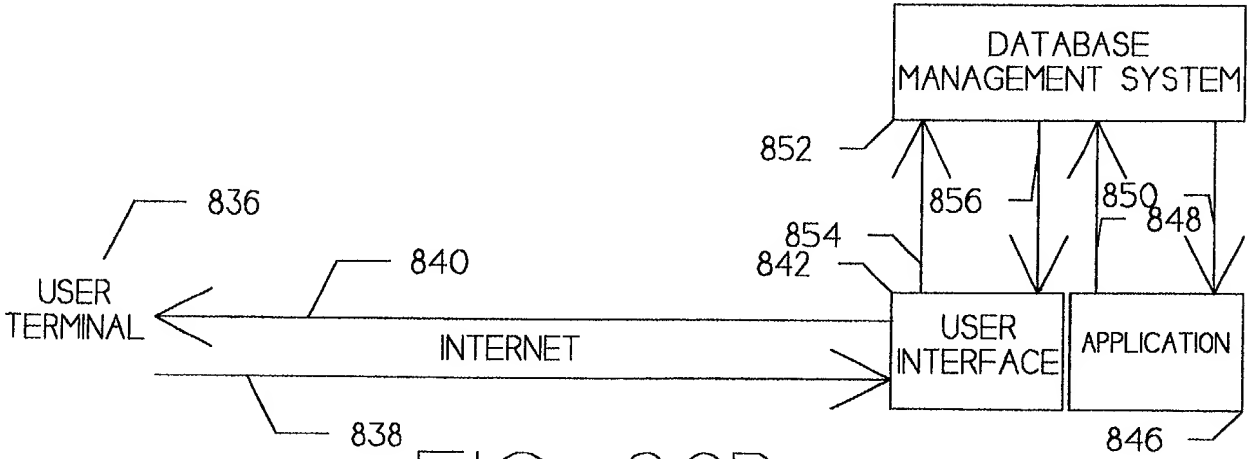

FIG. 26B